Meeting Summary
Alaska Water Resources Board
Anchorage, Alaska
August 11, 1983

The Alaska Water Resources Board meeting was held in Anchorage, August 11, 1983, in Room 114, Federal Building. The members of the board in attendance were:

David Vanderbrink, Homer
Peg Tileston, Anchorage
Wayne Westberg, Anchorage
Thomas Meacham, Anchorage

Commissioner Wunnicke was in attendance and served as executive secretary. Commissioner Neve was represented by Bob Martin.

Commissioner Wunnicke: Opening remarks --

Esther to Westberg, Tileston, and Meacham: "Do not have chairman -- appoint temporary chairman at this time."

Enter Dave Vanderbrink.

Wayne Westberg nominates Vanderbrink.

Westberg: Dave is the oldest remaining member.

Wunnicke: How long have you served?

Vanderbrink: I think it was 1970 and the Board was created in '68.

Wunnicke: I have some prepared remarks Mr. Chairman, and I will be learning from you because you've been handling some of the water issues in Alaska long before my time. We do regard water issues, particularly those on the horizon as being some of the major policy issues that I think the State is going to have to face in the coming years.

Vanderbrink: For the purpose of the record, we've called meetings to order at this point and this will be the Summer '83 meeting of the Water Resources Board.

Wunnicke: Concurrent with my confirmation as Commissioner of the Department of Natural Resources is the honor of serving on a number of boards; among them are the Forestry Board and Alaska Power Authority's Board of Directors, and as you are aware, as the executive secretary of this Board. I am happy to address the Board as the Commissioner of the Department of Natural Resources and as the Board's executive secretary. As Commissioner of DNR, I am pleased to see the Board convene. I will look to you for advice on water issues over the term of my office.

Water is undoubtedly our most important resource. From basic survival to complex technology, water is fundamental. A municipal sign spanning a highway in California reads, "WATER, WEALTH, CONTENTMENT, HEALTH." Can such a statement suggesting a balanced, successful society fit Alaska? Alaska's land area is large and its water resources -- both solid (ice and snow) and liquid -- are, as you know, abundant and widespread. But a net annual surplus of water over the total area of Alaska does not mean there are no water shortage problems in the State.

Specific areas around the state that have been experiencing water supply problems include the Mendenhall Valley of Juneau, the North Kenai Industrial area, the Anchorage area including the Hillside and Eagle River, and areas in and around Fairbanks. The North Slope is an area that experienced water supply problems for resource development. This problem was solved by using gravel removal pits for water reservoirs which are filled during periods of high spring runoff.

Increasing population and development of other resources has resulted in an increase in conflicts over the use of water resources. For example, use of water for mining operations may compete and conflict with the need for the same water body for recreational boating and fishing and community water supply systems. Hydroelectric development may be incompatible with fishery needs.

As you can see, we are in the business of balancing important social and economic considerations in water use. The viability of the commercial and sport fishing industries, petroleum and mining industries, the recreation and tourism industries, and hydroelectric power projects as well as public and domestic water supplies are all dependent on -- the quality and quantity of the state's water resources.

Within state government, the responsibility for the water resources is spread across several agencies. These agencies include the Departments of Fish and Game, Environmental Conservation, Community and Regional Affairs, Transportation and Public Facilities, and the Alaska Power Authority within the Department of Commerce and Economic Development. Management of water resources by the Department of Natural Resources requires close coordination with these agencies; but especially with DEC and DF&G, as mandated by the Water Use Act, in the issuance of water rights.

The importance of Alaska's water resources was not overlooked in the development of its constitution and statutory law. The Alaska Constitution Article VIII, Section 3, states, "Wherever occurring in the natural state, fish, wildlife, and waters are reserved to the people for common use." Again, Article VIII, Sections 13 and 16, provide for an appropriation system of water rights as implemented by the legislature under Title 46, Chapter 15 "The Water Use Act." The Water Use Act was passed in 1966 and provided for the allocation of the state's water resources for beneficial uses for the people of the state. The act, as you are aware, was amended by the legislature in 1980 to include the reservation of waters for instream use for such purposes as fish and wildlife habitat, recreation, navigation, and water quality. Presently, regulations implementing the amendment are under final review by the Department of Law. Completion of this review is optimistically expected next week (however, don't hold your breath). I hope it had the benefit of your review either individually or as a board before they were made final in the Department. Is that the case?

Mary Lu Harle: That is correct. We received considerable input at that time.

Wunnicke: (continues with speech) Other major legal questions concern both Federal reserve water rights and basin wide adjudication. The federal government is vested with federal reserved water rights on numerous federal land withdrawals in Alaska. These water rights include both diversionary and instream uses. In order for DNR to responsibly manage the state's water and adjudicate water rights, it is desirable to have the federal reserved water rights in the state inventoried

and quantified by appropriate federal management agencies. The state can then integrate federal water rights with state administratively adjudicated water rights. Adjudication of claimed federal rserved water rights may result in some court adjudications. The federal government has indicated it will await requests from the states before initiating quantification of these rights.

Federal law (McCarran Amendment) requires that state court adjudications of federal reserved water rights must be done on a basin wide basis. Prewvious DNR adminstrators and staff of the Attorney General's office concluded that legislative amendments are needed to the Water Use Act to allow administrative and court adjudications of federal reserved water rights. The 1982 version of the proposed basin wide adjudication legislation was not submitted to the legislature because it was determined to be premature to do so based on Governor Sheffield's criteria for new legislation and was not perceived to be vital enough for consideration during the first session. Before making a decision to submit a bill this year, we need a thorough review of other state's water laws and this proposed legislation by the Attorney General's office. It is my understanding we have not the legal authority to do B. W. A. is that correct?

Westberg: No. It is not our understanding at all. If I may interject; this Board -- four years ago, began pushing for at least a test case. We have an ideal situation here and that is, of course, the basin wide adjudication of the Ship Creek area. The issue has been skirted by the Municipality (I'm speaking personally now). Now we're talking about a $225,000,000 -- pop -- which is evading the issue or going around. It may be or may not be a solution, but the issue is still there, it ties in with Federal reserve rights and the whole gamut. We have a situation where it is very possible that there is enough water available in the Ship Creek Basin that the proposed 225,000,000 initial solution may not be necessary. As a matter of fact, the Board minutes of April '82 gives a little discussion with Smith (manager of the municipal water utilities) and John Harshman about the situation. We even called them before the Board. At one time, the AG's office was ready and willing to pursue the issue. I don't know what ever happened to that. Fred Boness came up with some interesting comments to the effect that basically the state could appropriate the water and take the stand that Elmendorf needs to quantify their water needs -- and then we adjudicate -- they have actually refused to.

Meacham: The basic authority to handle basinwide adjudication is there, but a lot of the procedural matters need to be addressed by legislation. Based on the outcome of the Northern Cheyenne case in the U.S. Supreme Court upholding the right of the states' to adjudicate Indian water rights as well as other federal reserve rights and now the way is probably clear.

Tileston: There is another area that also, I think, is right for basin wide adjudication. That's Indian River in Sitka which is, as I understand it, is already over appropriated.

Meacham: I should disclose here that I've been asked by the Municipality of Anchorage to look into the status of Ship Creek now as a possibility of a basin wide adjudication . . .

Westberg: Halleluiah!

Meacham: . . . and if there are no conflicts in my present employment and my past employment as Attorney General two years ago, then I would anticipate that they would want to proceed with that.

Wunnicke: (continues with speech) As far as the Management of Alaska's Natural Resources is concerned, this administration's goal is to encourage orderly resource development based on adequate resource assessment, a comprehensive planning program, a multi-purpose land information system, and consistency with sound conservation principles. This will promote orderly, prudent, and environmentally concerned development.

Given that Alaska's natural resources are the economic basis of our lives, I believe the quality of life in our State is dependent on the choices we make --

* in managing all of our natural resources;
* in allocating the benefits from those resources justly within the Alaska community;
* and in advancing the idea of the worth and dignity of all persons.

With respect to water resources, this Administration recognizes the importance of Alaska's waters for fisheries, transportation, energy, and industrial uses; as well as the need for dependable quality supplies for human consumption; and will pursue allocation to the most beneficial uses. Specifically, the Department's water management goal is to assure the orderly development of Alaska's water resources by implementing those programs providing for multiple use consistent with the public interest -- both present and future.

Turning to the role of the Department of Natural Resources in carrying out its water resources responsibilities, I would like to summarize the present organization of the Department. It is composed of eight divisions -- five line divisions -- the Division of Agriculture, Division of Minerals and Energy Management, Division of Parks, Division of Forestry, and the Division of Land and Water Management.

The Division of Land and Water Management has the overall responsibility for management of surface activities on all state owned lands unless they are legislatively designated for management by another division, as with state forests or state parks, and for the management of Alaska's water resources.

The line divisions are supported by the Division of Geological and Geophysical Surveys, the resource inventory arm of the Department; the Division of Technical Services, which is responsible for land records, title, and surveys; and the Division of Management, which handles personnel, budget, and fiscal matters.

The Division of Land and Water Management activities range from resource planning in Bristol Bay to land selections in the national forests; from surface use permits for oil production facilities at Prudhoe Bay to disposal of land for homesites in the Susitna Valley; from gravel sales to allocation of rights to use water; from the layout of a state subdivision to planning the future management of large acreages of state land.

The Division's activities both facilitate and regulate the development of Alaska's natural resources, and the aim is to achieve maximum public benefits from a balance of productive development and conservation. Likewise; the recreational, aesthetic, and cultural qualities of Alaska that are so important to most of its citizens are largely based on the individual use and enjoyment of the land and the resources the land supports. The activities of the Division are intended to facilitate and enhance these uses while preserving continued opportunities for them in the future.

The Division of Land and Water Management has been budgeted $1,201,500 for FY'84 to carry out the following three water projects.

Dam Safety -- to minimize risks associated with inadequate design, construction, operation or maintenance of impoundments.

Water Use -- allocate beneficial use of water through adjudication of surface and ground water for both instream flow and diversionary appropriations.

Water Coordination -- to provide mechanisms for the collection and dissemination of water use data and to facilitate coordination with other state agencies, federal agencies, municipalities, and various other concerned groups and organizations.

Accomplishments within these projects include a state dam safety program evaluation, dam safety grant application to the Federal Emergency Management Agency, preparation of the previously mentioned instream flow regulations, and receipt of federal matching funds for the joint USGS-DLWM water use program.

Significantly, the three district offices aggregately processed 1500 water rights cases in FY'83 to reduce the total pending case file backlog load to 601. Larry Dutton, Chief of Water Management Section, and Meg Hayes, Southcentral District Manager, will be providing additional details and specifics on these projects.

The Division of Geological and Geophysical Surveys is mandated to conduct surveys to determine the potential of Alaska lands for the production of metals, minerals, fuels, and geothermal resources; the locations and supplies of ground waters and construction materials; the potential geologic hazards to buildings, roads, bridges, and other installations and structures; and conduct other surveys and investigations as will advance the knowledge of the geology of Alaska. Additionally, it is also mandated to "collect; evaluate; and publish data on the underground, surface, and coastal waters of the state."

The Division of Geological and Geophysical Survey is responsible for the technical support for the water management decisions of the Department and is the primary water resources data collection agency for most state agencies. This involves close coordination with the management agencies to conduct water resource inventory and analysis of surface and ground water supplies. The Division of Geological and Geophysical Survey has been budgeted $1,054,000 for water resource projects of which $500,000 is matched by the USGS Water Resources Division.

Water Resources projects are set forth in the Alaska Water Resources Evaluation (AWARE) Five Year Plan, formulated cooperatively by DGGS and USGS, an interagency plan which significantly guides coordination and cooperation for investigation and inventory of Alaska's water resources. These two agencies respectively have statutory authority for coordination with other agencies and private concerns as well as responsibility to collect water resources data and conduct investigations which have been identified by management agencies and perceived public need.

A multitude of projects are currently underway in each of the six Alaska project regions: Arctic, West Central, East Central, South Central, South West, and South East. The projects include the resource inventory CIP, as well as the water resource inventory. Other significant projects include the important, but underfunded, water well data inventory; as well as the navigability and defense of submerged lands hydrologic data support.

Bill Long, Chief of Water resources Section, DGGS, will be providing you with further details and specifics on these projects.

The diminished role you have recently had due to a lack of funding is reflected in our own Land and Water Management Division where our water staff has dwindled from 21 to 7. Water simply must be elevated to a more important position, and we need you to beat the water drum in the public arena.

In closing, I appreciate talking to you today regarding these important water issues. By working together, we can achieve the balanced, successful society for Alaska; suggested by the California sign reading; "Water, Wealth, Contentment, Health." While these remarks have been general in nature, I would be happy to address any of your questions in a specific area.

Vanderbrink: We thank you for being here.

Wunnicke: We've got a good staff if you have any questions.

Vanderbrink: Yes. I'm aware of that. I would just like to mention that we've spent a lot of effort in trying to get the various agencies to work together. Also, to get a permit system instituted that didn't require a permittee to go to dozens of offices. We've had mixed success in that.

Wunnicke: May I ask Jim Barnett to respond. We've been working very hard on the permit system in general and it does require, as you say, getting a lot of agencies together.

Barnett: I have an almost canned speech now on the permitting issue. The Sheffield Administration has responded, I think very effectively, to that. It's in the works still, but the major permitting agencies, DNR, DEC, and DF&G are working together with the Governor's offices of management and budget in trying to coordinate a process. One of the things that we'll accomplish, regionalized permits will require the agencies to talk to one another to try to resolve disputes at a lower level -- hopefully streamline the process for permitting, yet still provide the necessary discussion that is required so that each of the departments have their views aired and resolved. There's a memorandum of understanding out now for public comment.

Westberg: Not being cynical, but we've heard the same speech in the previous administration.

Barnett: So did I. I worked for an oil company before I came to the Sheffield Administration. I heard it for four years too.

Westberg: What happened? All the other previous MOA's and the stuff we kept pushing -- is that all swept aside and new governor starting again?

Barnett: Some of it. The problem in some of the efforts done in the previous administration is that they became extremely cumbersome. We are trying to make the process simple. The biggest problem are unwilling to negotiate in a reasonable timeframe. We are going to try to expedite that.

Meacham: Isn't there some incentive to accomplish that before the legislature is in session again?

Barnett: You betcha. The senate adopted permit reform. They told the Sheffield Administration to have something ready to go or they would adopt something next year.

Tileston: The problem with permit reform is that the issues are not simple -- they must be dealt as complex and multi-valued problems. It's not easy and it shouldn't be done that way.

Barnett: There is a key concern. We're trying to establish a process that doesn't set the burden of proof against anyone, but it makes everyone come to the table and deal with the issues in a quick timeframe.

Tileston: I would have hoped you would say a realistic timeframe.

Barnett: A realistic timeframe.

Westberg: I like the word quick.

Vanderbrink: Next is The Water Management Update -- L.A. Dutton.

L.A. Dutton: Up until last month, for the past six years, I was District Manager for the Southcentral District for the DLWM. One of the responsibilities then was to process applications for water rights. I do have some knowledge of water issues. Basically it's a new ball game for me -- I'm enjoying it and I'm learning a lot about water.

In her address, Commissioner Wunnicke briefly described the current organization of our department. I will elaborate on the Division of Land and water Management's (DLWM) organization and that of the Water Management Section in particular.

In Fiscal Year 1982, DLWM experienced a severe shortage in personnel services funding. The reasons are many and complex which I won't attempt to go into, except that they are largely tied to the budget process. Our division was simply not allocated sufficient funds to cover all of our positions. Due to this, we were not able to fill vacancies and in addition, some of our personnel had to be

placed on layoff. The net result was a major reorganization and streamlining of DLWM. This involved numerous transfers of positions and personnel to maximize the effectiveness of the remaining work force.Most transfers and reassignment of personnel were from the Central DLWM office to its district offices, where the vast majority of public contact and application processing takes place. This assured that the districts were not excessively understaffed and remained able to maintain the highest possible level of quantity and quality production.

Not the least of DLWM staff functions reduced was Water Management. Going in to Fiscal Year 1983, the Water Management Section had 21 positions, but by the end of the year, that number was reduced to seven. DLWM's reorganization combined the previous Policy and Coordination Section with the Water Section into what is now known as the Water Management and Procedures Section. The Procedures Unit is responsible for producing, distributing, and maintaining policy and procedures for all DLWM's functions. More recently, the functions of land selections and land exchanges, formerly in the Division of Research and Development, were assigned to the Water Management and Procedures Section. This is the situation as we ended up FY '83 and entered the current fiscal year.

Obviously, the Water Management Section no longer enjoys a large staff which previously enabled the section to devote considerable time to the development of program enhancements. Fortunately, during recent years, the section has made significant strides in developing computer programs to facilitate the storage, manipulation, and retrieval of water use and water related casefile data. The section has also managed to capture the bulk of water management policy and procedures into a "Water Management Policies and Procedures Manual." This provides a much needed reference particularly for personnel in the District and Area offices adjudicating and processing various water related applications.

Still another significant accomplishment was the publication of the "Water User's Handbook" in May 1981. This booklet, still valid today, is a public information document designed to inform Alaskans about water rights in our state, and the procedures for obtaining water rights. We have a few copies of this booklet here today for those who would like one.

These accomplishments; and many others as well, completed during a period when the section had more resources; make our present job that much easier. There is, and continues to be, much to be done to manage our water resources.

The aim of the present Water Management Staff is not to slacken, but rather to strengthen our support of district operations. We will do this by striving to maintain a current water management policy, to provide training, to initiate regulatory and statutory changes when appropriate, and to provide the necessary staff support to our director and commissioner in policy development for water programs.

Since mid-March of this year, when the present organization largely became effective, the Water Management and Procedures Section has undertaken and completed several significant water related tasks: One of these was a question and answer type report evaluating the current status of the Dam Safety Program.

Only a limited number of copies were compiled. They were made available to the commissioner for use in determining the appropriateness of funding the Dam Safety Program and in discussions with legislators. We have a copy here today for examination by any of you who may wish to look at it.

Another undertaking, also related to dam safety, was a grant application to the Federal Emergency Management Agency for a federal grant to be applied to dam safety program development. The amount applied for is small, only a little more than $37,000; but if approved, will enable us to accomplish a number of tasks necessary to prepare us to conduct major detailed inspections of several dams rated in the high hazard category beginning in Fiscal Year 1985. Presently, we do not have within this Division the ability or necessary expertise to conduct these inspections. We are, however, exploring the possibility of assistance from DGGS and contracting with the private sector for dam inspections. We were successful in obtaining extra dollars from the legislature to fund a civil engineer position for dam safety this fiscal year.

A third accomplishment, during this time, was completion of an extensive review and redraft of the proposed instream flow regulations. As Commissioner Wunnicke mentioned, these are now under final regulation review by the Attorney General's Office.

Finally, we undertook and as you can see, succeeded in making the arrangements and necessary preparations for this meeting now underway.

What lies ahead? Already mentioned is strengthening our support of the district offices. This is crucial to effective water rights administration.

Commissioner Wunnicke touched on some of the more critical issues that we face, today. One of those was instream flow reservations. A high priority will be given to implementing the instream flow reservation regulations as soon as they are adopted. Procedures will be needed to guide the adjudication of instream flow applications. A supplement to the "Water User's Handbook" covering instream flow reservations is presently contemplated.

Another issue was basin wide adjudication. We would like to pursue the basin wide legislation and lay the ground work that will allow adjudication of federal reserve water rights. This has been tossed about long enough; it's time we started getting some results.

Also the Commissioner mentioned Dam Safety. Further development of this program will be pursued in earnest. Described previously were the dam safety program status report and the grant application. The dam safety program is in the fledgling state as programs go. The Water Use Act does not contain specific reference to dams or other impoundment structures, but does mandate that the means of diversion or construction be adequate in order for DLWM to issue a permit and subsequently a certificate of appropriation.

What the statutes lack in specificity, the regulations make up for. Article 3, "Dam Safety and Construction," of the Water Management Regulations, 11 AAC 93, contains detailed provisions and criteria requiring the submission of an application and issuance of a permit for dams 10 feet or greater in height or

storing 50 acre-feet or more of water. What is needed, however, is the ability and clear authority to field inspect hazardous dams and compel dam owners to build and maintain a safe dam, insuring the protection and safety of downstream human habitation and development.

Thus far, the dam safety program has resulted in an inventory of 175 dams. Of these, 37 are considered high hazard and 36, significant hazard. These hazard ratings are based on the threat these dams pose, due to their height and impoundment capacity, to existing downstream development and habitation. Accordingly; these 73 dams, considered hazardous; need comprehensive, detailed inspections by experienced dam safety experts and engineers to determine if they are safe dams or if they need repair or modification to make them safe.

In the mill is a major update of Water Management Policy and Procedures including the full integration of the Water Manual into the standard DLWM Policy and Procedures Manual. The procedures must also be given consideration for adoption as regulations. Many of our procedures may not pass the test for labelling them "Internal Procedures" and failing that test, they may not be legal unless adopted as regulations under the terms of the Administrative Procedures Act.

Vital to our ability to manage Alaska's water resources is the support provided by DGGS. Their inventory and investigation of the resource is crucial in solving the water shortage problems and water use conflicts already mentioned. We will be requesting their assistannce in providing data for instream flow, basin wide adjudication, dam safety inspections, and for other issues that develop. DGGS' "AWARE" program, which Bill Long will discuss in his presentation, is a comprehensive long range plan for carrying out the many water resource investigations with which they are involved. We look forward to continued close cooperation with DGGS in identifying needed water resource investigations.

That completes the general discussion of our accomplishments to date and the status of our various programs and the issues involved. In your briefing books you will find a document entitled, "Current Status Water Management Issues," providing some additional detail. Additional accomplishments and programs relating to our district offices will be discussed by Meg Hayes.

I am happy to have had this opportunity to speak to you today and I will be pleased to try and answer any questions you may have.

Tileston: Fifteen hundred water permit applications is a significant number to be processed. In the past, the easy ones were done first -- leaving the hard ones to languish. Has the Division addressed that -- are the hard ones being worked on with the same vigor?

Dutton: I think that's true today. One of the most difficult types of case types that we've had to deal with is the Grandfather Water Right and for quite some time, we've had a large number of those in our backlog. The vast majority of those have been completed and I believe the last figure of just a few months ago was that there were 21 left. Just a few years ago we started out with some 1200 Grandfather water rights.

Westberg: Of your present backlog of 600, how many are in the Anchorage area?

Dutton: According to Meg Hayes, the NCDO has 226 cases pending and SCDO has 370 applications pending and 43 in SEDO.

Tileston: Larry, you mentioned that you may be having some procedures that need to be under regulations. Could you identify those procedures that need to be regulation?

Dutton: The basic rule that is applied in determining if a procedure or policy should be under regulation is if it affects the public directly. Virtually, I feel that a great many of our policies and procedures in water for example, do just that. They affect the public directly, but sometimes there is a fine line between what should and what should not be in the regulation. Right now we have several sections of our procedures in the AG's office to answer that question.

Vanderbrink: Did you say that there is a point where a procedure may or may not need to be a regulation?

Dutton: If it doesn't affect the publics ability directly to apply for or obtain some right from the state, then it's considered an internal procedure -- then we don't have to put it in the regulations.

Westberg: In regards to the dam safety program, there has always been a funding problem and even a staffing problem. At one time, we recommended, I believe, that an attempt be made to pawn it off, if you would, to DOTPF. Is that still an ongoing pursuit?

Wunnicke: I had a similar thought quite independently of what you'd recommended -- that it might more appropriately be with DOTPF, but we've not pursued it.

Vanderbrink: Thank you, Mr. Dutton and we will proceed to "Overview of Statewide District Office Functions."

Hayes: I have been asked to give you an overview on district operations. As you know, there are three districts, Northcentral, Southcentral and Southeast. Despite the fact that the geographic settings are so diverse, we have found that we share a number of the same management problems.

All three districts are finding frequent objections by prior appropriators particularly in response to new applications for water rights.

The construction of two new schools in the Fairbanks area has caused concern among nearby land owners. The two schools are Pearl Creek Elementary and Weller Elementary School.

DGGS and DLWM are cooperating in a monitoring program on 21 wells in the upland areas near these two schools. The study will show not only the effects these schools will have on nearby groundwater systems, but also will monitor water quality. Both nitrates and arsenic are possible contaminents. Wells around Pearl Creek will be monitored once a week for about three months, then probably back off to once every other week.

Vanderbrink: How large are those schools?

Hayes: About 4000 gpd.

Vanderbrink: It's a good chance to educate the public because school water consumption is traditionally low anyhow. You could make the case that the actual school consumption is equivalent to a couple of households.

Hayes: In Anchorage, the 3,800 gpd for Golden View Elementary school has also drawn local concern from nearby landowners. In this area, previous monitoring has given us a pretty good idea that the drawdown for the school will not affect existing appropriations.

Tileston: I think this brings a point that's probably pretty healthy in that people are beginning to realize that there's not an endless supply there and that major development can indeed have a significant impact on their own situation, particularly where data supports that there is no problem. I view this as a real positive circumstance.

Hayes: In Eagle River, we find that the proposed development of duplexes and subdivisions have caused local concern. The belief that the groundwater resource is limited prompted two separate homeowners groups to take over 70 water rights applications back for distribution.

In one case, the Division rejected an application by Turner Construction for an increase of 345,000 gpd. This was based on a report by DGGS that the additional appropriation would have an adverse effect on a prior appropriator, namely, the Municipality of Anchorage. The rejection was appealed, and is being restudied by DGGS in light of another year of production data from the applicant and the Municipality. It does appear that we can issue a permit for a reduced request of 61,000 gpd. In the meantime, there is an indication that the Municipality may be interested in taking over the system.

The water situation in Eagle River may be alleviated by the Municipality if Anchorage's long term water supply strategy. Anchorage has received funding to start part of the Eklutna project. This first phase would bring water from Ship Creek to Eagle River. During the second phase, the flow would be reversed. Anchorage has also purchased a new well in the Eagle River area which may produce between 500 to 1000 gallons per minute. MOA is also constructing a 5,000,000 gallon storage tank at the well site.

In the long run, MOA is depending on the bond sale funding to complete the Eklutna project to provide 70,000,000 gpd.

In Juneau, the possibility exists that water in the Mendenhall Valley has been over appropriated. The division is holding any applications for new wells in abeyance, although we are processing applications for existing wells for domestic use. Once again, DGGS is starting to conduct water availability studies. When these studies are complete, pending applications will be processed in the order of filing until the limit of estimated available water is reached or we run out of applications.

Vanderbrink: Was there any objection to the Mendenhall Valley school water appropriation?

Hayes: No. It looks like there the District thought that we were not going to be able to sign off, that giving the water right was not going to affect the prior appropriator.

Hayes: In Auke Bay, the Division is taking similar precautions, but for different reasons. This problem has to do with salt water intrusions. The more fresh water is pumped out, the further salt water intrudes, and some wells are becoming contaminated. Again, DGGS will start a project this September to determine the extent of the salt water intrusion and the effect of increased fresh water pumping.

Vanderbrink: But you're addressing that under the water rights?

Hayes: The question is whether they're going to be able to appropriate fresh water which is the only type of water that comes under our water laws.

Tileston: Because the draw down was causing the intrusion, I assume?

Hayes: Yes. We are cooperating very heavily on DGGS for making management decisions.

Vanderbrink: Were there any stipulations put on the Mendenhall Valley application or do you know? I mean, the school itself?

Hayes: I don't know if the school was the problem there.

The City of Juneau has just passed funding for construction of an extended water line from Salmon Creek (at the hydro tailrace) to the Mendenhall Valley and Auke Bay. This could alleviate these problems in the long run.

Another management problem we share is interest in the instream flow regulations. The division is not presently accepting applications for instream flow, pending adoption of our regulations.

In Fairbanks, a local entrepreneuer applied for instream flow for his local tourist attraction. John Reeve is refurbishing a dredge near Fox on Engineers Creek and requested instream flow sufficient to keep the dredge afloat.

DGGS and the Northcentral District are helping Doyon and WGM develop their instream flow evaluation program necessary to develop an asbestos deposit north of Chicken. It is possible that low flows in August and September will require construction of a reservoir, which may also be necessary for winter operations.

In Anchorage, the District received an application for instream flow to protect Potter Marsh. While this application was returned, the district is active in the Potter Marsh task force, and believes that existing procedures are sufficient to protect the hydrologic regime of the marsh until instream flow regulations are effective. DGGS and the district are actively contributing to the hydrologic studies of the marsh.

Several of the large projects mentioned previously may be affected by instream flow requests. The Salmon Creek, Eklutna, and Ship Creek developments may be affected by the instream appropriations for fisheries.

In addition, hydroelectric projects may be affected. The Federal Energy Regulatory Commission license application was modified by APA prior to acceptance. The modification related to fisheries concerns and the flow release schedule presented in the application. The new release studies look at flows from 2000 cfs to 31,000 cfs and the analyses relate to other aspects such as recreation and navigation as well as fish.

Westberg: Have the applicable instream flow regulations been addressed at all in the Eklutna project to date?

Hayes: Not officially, but we recognize that that is probably going to be.

Westberg: No -- you do, but I mean the 7.5 million bucks they spent so far -- have they been over talking to you?

Gary Prokosch: No. They actually have not spoken to us at all about that project. I'm meeting with them this afternoon.

Hayes: Same thing with Ship Creek.

Prokosch: Their plans are to take an additional 14 million gpd from from Ship Creek to supplement Eklutna project in the long run -- then in the short run, bring it from Ship Creek out to Eagle River.

Hayes: Other problems continue to haunt the districts. For instance, we are finding that many grandfather water rights were issued for more water than was actually being used. Sheldon Jackson College has a certificate for 40 cfs for hydroelectric power generation from Indian River. It is believed that a large portion has never been used, but there has been no proof. Sheldon Jackson has also applied for water rights for the operation of a hatchery. It is willing to transfer part of the hydro certificate to the hatchery. However, several agencies object. US Park Service wants the water as is and claims federal reserved water rights. ADF&G wants it left as instream flow for fisheries. The City of Sitka wants the water for a city water supply.

Other situations like this exist in Anchorage and Kodiak.

The Districts have been active in participating in cooperative efforts with other state and federal agencies.

The Fairbanks office has made major efforts to field check mining operations before issuing permits to appropriate. ADF&G and DEC has also cooperated in this effort. NCDO has visited 272 operations. The results are the mining report which you should have and a future report concerning water use related to difficult types of equipment.

Jerry Brossia, NCD Manager, is active on the placer mining task force. This group is proposing to classify streams based on the relative importance of the streams uses, such as drinking water, anadramous fish rearing, resident fish, mining,

water-based recreation, timber transportation or suction dredges. Each stream receives a two part score for resource occurance and demonstrated use. The classification system has not yet received official sanction from EPA or DEC.

The Southcentral District has been active in the Potter Marsh task force which Chip Dennerlein will be telling you about later.

The districts have received some help from the statewide computer system which helps us with casefile tracking, identifying senior appropriators, notifying ADF&G and DEC and other agencies by printing notices, letters to the newspapaer or postmaster, legal notices, permits and certificates, other routine letters. Copies of these should be in your notebooks.

Westberg: Are you entering the well logs on the various water rights applications into the computer?

Hayes: At this point it's just the management, the casefile information -- I believe that there are plans to do that.

Dutton: Presently, the well logs are given to USGS. We're working on a program right now that will allow us to incorporate the USGS WATSTORE program into our own.

Hayes: Finally, a problem that we all share is the reduction in funding water management programs as well as other projects. In your packets, you will find the statistics on district accomplishments during FY'83. Rather than repeat these numbers, I would like to mention a few other facts.

It averages about 2.3 work days to process a water right casefile. This is based on several years of data. Based on this, existing staffing levels, and the average rate of new applications, NCDO will have a backlog of 232 casefiles at the end of FY '84, SCDO will have a backlog of 561 files and SEDO will have a backlog of 97 files, for a total of 890 files.

We realize that it may be unrealistic to reduce the backlog to 0, but to reduce it 1/2 would require four new positions. This number would be greater if we continue to provide as much field presence as we did in 1983.

It is tempting to let water rights casefiles stack-up, especially in lean budget cycles, because the date of priority is based on application not on date of permit. However, as I have indicated below, the possibility of water shortages is becoming a matter of public concern. To declare a water source over-appropriated can have serious implications for those who are using the source, but who do not have water rights. Lending institutions may become reluctant to accept buildings and homes as collateral, industries may be reluctant to expand and peoples livelihoods may be jeopardized. We have been fortunate in not yet having such a situation develop. But it appears that the likelihood is increasing and the state may incur some liability for not processing applications in a timely fashion.

Westberg: Doesn't that just get down to the need for a priority system? In other words, you work on ones where you know you got a problem area and let the others stack up?

Hayes: I think that's maybe what we do although two years ago, I'm not sure we would have predicted that we would have some of the problems that we've got. Some of these are relatively recent and it's a wise person that can predict two or three years in advance. For instance, the North Kenai used to be a very important and controversial area, yet things have worked our pretty simply there. There's very few protest from that area.

Vanderbrink: In the case of the schools, you mentioned the concern about the drawdown. Suppose that we have a situation like a school that needed to be installed and need that water, but it was all appropriated. What happens?

Hayes: What they looked at in Fairbanks was bringing in community water for it. That's one possible solution to it.

Vanderbrink: What I'm trying to say, if you have what one might call a higher use for the water.

Westberg: The commissioner has that power.

Meacham: In addition, if it's a public facility there can be condemnation used as a last resort.

Wunnicke: May I ask a question Mr. Chairman? (I'm telling you I'm learning along with you.) With respect to something like Sheldon Jackson, are you aware of other major overappropriations that need to be addressed?

Hayes: In that area?

Wunnicke: Yes, throughout Southeast.

Hayes: Yes, I don't have the facts readily available, but nobody knows if Ship Creek -- what the real situation is there because of the obvious problems -- we may be over appropriated there. We just don't know.

Wunnicke: I may have to retract my original statement that at least we have not appropriated everything twice -- we may already have.

Jean Baldrich: Mr. Chairman, my name is Jean Baldrich and Meg, you mentioned that you were returning the instream flow applications to the applicant (Audubon). People who are first in time are first in right, and the state thinks so. Wouldn't it be more appropriate to accept the application and assign a trialing date so the applicant has a priority date?

Hayes: We returned it on the advice of the Attorney General's Office.

Meacham: With regard to the Audubon Society application, I have been giving them some informal advice about that and the director's decision has been appealed to the Commissioner to get some definition of what the Department or what the Division should be doing with an instream flow application in the absence of regulations.

Harle: We might expect a response on the status of those regulations tomorrow.

DGGS-USGS PROGRAM UPDATE

Ross Schaff: We're going to make a joint presentation dealing with water data collection and analysis which involves primarily the USGS and DGGS.

I'd just like to make a couple of comments to put our activities into perspective. There's sort of an alphabet soup of agencies in water data collection and I think we've made some significant steps forward in the coordination of data collection in the state. One of these major steps was a meeting of the University, DGGS, and USGS representatives a year ago in October, to try to develop and improve upon a 5-year water data collection plan. It outlines what the scientists of these agencies think are the major data collection problems facing us over the next 5-years. I'm very proud of that accomplishment.

In the past, DGGS's budget has been a capitol budget. In that capitol budget, we're to be funded all the activities for which DGGS is responsible. There was a great deal of competition for those funds. For FY'85, we are placing all DGGS' funding back into the operation. There will be a component, for example, in the Water Management Section. I think we will see a better coordination of the water management information and the activities of DGGS.

We are looking at a fairly substantial program. The total USGS/DGGS budget will total out to some $5.5 million for water data collection in the state, and we can look at a staff of some 80 people. I've placed the water data collection program in a very high priority.

Bill Long: I was fascinated with the Commissioner's discussion of an incident in her early life in New Mexico where upon a man was shot over a water issue. Of course, that is something I think that most of us can imagine. Water is very important in New Mexico. Something like that, of course, would never happen in Alaska, unless we look at the situation this spring in Chitina wherein a man was killed over a water issue at a well there.

As DGGS's Water Resources Section Chief, I look at what our tasks are and our goals. We have basically to collect water data. Also, we are required to coordinate water resources data collection with all agencies. And also, I consider one of our important duties, to provide DNR with the data they need for the management of Alaska's waters.

In order to do these goals, I think we need four things. (1) a general plan, that's our AWARE plan; (2) a strong support organization -- we are adequately supported at this time; (3) an excellent team -- it's hard to say enough on the qualities of the hydrologists that staff the DGGS team. They are experts in their fields. (4) The cooperation from other teams in other agencies -- Federal, State, private, and certainly, with USGS. Our arrangement with the USGS, Water Resources Division, is one of the best of the 50 states, if not the best.

Our present program with USGS this year is on the order of $400,000 each side. I could refer you to the details in our present program to the sheet that I've handed out. It lists our projects organized into six regions: Northern, West Central, East Central, Southwest, Southeast, and South Central, for priorities in a regional sense. You will find that the SCD receives over 50% of the financial and for that matter, individual attention of the hydrologists with a budget of around $604,000. I think in water resources there's a reasonable explanation for a distribution of that sort, that is, without people -- there are very few water problems. As the population increases, the water problems increase. Of course if we were to follow that totally, we would travel a wrong path because we need to know what our streams are like, what our ground water is like -- the quality and so forth, even though people aren't living there at the present time.

Our projects are generally grouped in ground water, surface water, and water quality categories. I have not mentioned another aspect of our total program and that is the operating budget. It has only one project in it and that's the water well log data collection program which is a very severely underfunded project and one which is supported far more greatly on the federal side than on the state side. It is one of the basic ways of obtaining data on the groundwater at any given region. Our present system involves primarily the USGS WATSTORE system -- it's working quite well for us. We will continue to use it until the state system is capable of doing the same job.

The other program in which we are fairly intensly involved (we have three hydrologists involved in it) is the navigability and defense of tidal lands program which is a cooperative effort with DLWM. Hopefully, if we acheive our goals, that I've referred to here with the ways that I've indicated here, the folks in Chitina will have to shoot each other over some other issue than a water issue if, in fact, they want to shoot the other guy.

[There were no questions.]

Phil Emery: Okay, I've handed out a list of ongoing projects in water resources as of May 1983.

-Slide presentation here.

A large amount of our projects are funded 50-50, mainly with DGGS also MOA, APA, and other local cooperators.

Alaska District Program, May, 1983 (see insert).

Tileston: What kind of reporting mechanism do you have for these studies?

Emery: Most of what we call the projects result in a report. The data collected is published every year. They've been coming out for 15-20 years. It's amazing how many people don't know they're available.

Westberg: I recall a resolution of ours about a year or two ago in which where the state issues a permit for development work there'd be a sharing of non-propriatory information. What ever happened to that?

U.S. GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

Alaska District Office
1515 E. 13th Avenue
Anchorage, Alaska 99501

For more information, contact:
District Chief - P. Emery 271-4138, Anchorage
Sub-district Chiefs - L. Leveen 271-4153, Anchorage
B. Parks 456-0214, Fairbanks
H. Seitz 586-7216, Juneau

ALASKA DISTRICT PROGRAM
May 1983

| Project (Short Title) | Project Objectives | Project Chief | Cooperating Agency(s) |
|---|---|---|---|
| Surface-Water Stations<br>Ground-Water Stations<br>Water-Quality Stations<br>Sediment Stations | Provides bank of data as basis for determining current conditions and measuring changes in various aspects or properties of the hydrologic system. | R. Lamke<br>G. Nelson<br>R. Madison<br>J. Knott | Includes most listed below |
| Small Streams Floods | Evaluate flood characteristics from basins less than 100 mi² | S. Jones | ADOTPF |
| Ground-water Network Design | Review and modify existing network; define significant aquifers and assess availability of ground water in selected areas | J. Brunett | DGGS |
| Water Use | Define and quantify various sources and water-use categories | L. Patrick | ADNR |
| Arctic Area Water Resources | Reconnaissance of selected large river basins to identify hydrologic characteristics. | C. Sloan | BLM |
| North Slope Hydrology | Distribution and availability of water supplies, including seasonal snow and ice, springs and lakes | C. Sloan | BLM |
| NW Alaska Gas Pipeline | Identify role of water with regard to frost heave along proposed route; evaluate proposed resolution of frost heave problems. | C. Sloan | USGS |
| Fairbanks Geohydrology | Geochemical processes at Borough landfill, potential effect of leachate on ground-water quality. Water levels and ground-water quality in uplands. | J. Downey | FNSB |
| Tanana River Sediment | Determine sediment-transport characteristics as guide to gravel extraction and evaluation of effects of Chena River Floodway construction | R. Burrows | COE-CRREL |
| Sediment Transport-Devils Canyon | Provide basis for evaluating effects of dams on river hydraulics downstream from the proposed dams on the Susitna River | J. Knott | APA |
| Copper River Basin | Regional appraisal of distribution, quality, availability of water resources, relation to geology and physiography of basin | P. Emery | DGGS |
| Placer Mining--Channel Morphology | Document sediment transport and channel changes due to floods from breakout of settling pond dams (Kantishna Hills; Birch Creek, north of Fairbanks; Sixmile Creek, Kenai Peninsula | G. Solin | DGGS & NPS |
| Mat-Su Valley Lakes | Develop model to predict potential fish yields of 9 lakes based on limnological properties. | P. Woods | DGGS |
| Big Lake | Determine limnological characteristics, relation to primary productivity, present trophic state, and susceptibility to cultural eutrophication | P. Woods | DGGS |
| Peak & Low Flows and Lake Levels | Evaluate flood and low-flow characteristics, monitor lake levels in the Matanuska-Susitna basin | C. Savard | DGGS |
| Mount Spurr Hydrologic Hazards | Evaluate potential hydrologic hazards, especially flooding and mudflows, posed by future volcanic activity | R. Emanuel | DGGS |
| Pt. MacKenzie Hydrology | Lake and ground-water level data, information from drilling of new wells--background for proposed development (agricultural and "other") | L. Leveen | MSB |
| Anchorage Geohydrology | Address water-resources data and information needs of expanding urban area--water supply protection of water quality, effects of land-use changes on hydrologic environment (ground water, streams, lakes, wetlands) | T. Brabets | MOA |
| Anchorage Urban Runoff | Flow characteristics and quality of runoff from various land-use categories and effect of changes in land use | T. Brabets | MOA |
| Atmospheric Fallout | Identify and assess importance of atmospheric sources of dissolved constituents in urban runoff | T. Brabets | USGS |
| Chuitna Basin Baseflow | Assessment of baseflow conditions in an area of anticipated strip mining for coal | C. Savard | DGGS |
| North Kenai GW-SW Relations | Effects that large-scale industrial use of ground water has on lakes and on other ground-water users | G. Nelson | KPB |
| Chilkat Valley-Tsirku Fan | Appraise water resources of Chilkat basin, with emphasis on source and mechanism of ground-water discharge at toe of alluvial fan--maintains open water conditions, supports late salmon spawning run that attracts large population of Bald Eagles | E. Bugliosi | DGGS |
| Knik Glacier | Develop model to simulate future glacier behavior and potential for re-formation of ice-dammed Lake George | L. Mayo | DGGS |
| Exit Glacier | Recent glacier activity (recession), potential hazards (floods, avalanches, glacier advance) and water supply at proposed NPS Visitor Center | C. Sloan | NPS |
| Mendenhall Valley GW | Appraisal of ground-water resources, potential for induced infiltration of surface water to aquifers and for salt-water intrusion due to heavy ground-water withdrawals near coastline. | E. Bugliosi | JCB |

Tileston: I think it was probably filed somewhere.

Westberg: It's really a shame if data is never accessed. In regards to your Anchorage Study, is the Ship Creek basin over appropriated?

Emery: It's really not our bailiwick, we don't have that on our files. DNR does.

Westberg: In regards to the observation wells, is there a gradual decline in the water level in the Ship Creek formation or is it just subject to seasonal variations?

Emery: It's more or less holding its own.

-- At this time Bill Long presented a slide showing the location of some of DGGS' projects.

Vanderbrink: Next Chip Dennerlein on Potter Marsh.

Dennerlein: August 10, 1983, Gentlemen: In response to broad-based citizen concerns regarding the long-term integrity of Potter Marsh, the Municipality recently established a Potter Marsh Task Force. The Task Force was created in cooperation with several state and federal agencies and private citizens representing home-owner, conservation, and development interests. The purpose of the Task Force will be to study a variety of issues in and around the Potter Marsh and Potter Point State Game Refuge which have the potential to effect changes in the Refuge over time, and to make recommendations to various agencies regarding management actions, both within and outside the Refuge boundaries.

One of the greatest concerns involves hydrology (both surface and subsurface) within the Marsh and surrounding hillside. Water supply to the Marsh, both in terms of quality and flow regimes, will be critical factors in assuring long-term viability of important Marsh habitats. It is evident that we lack even the most rudimentary baseline hydrologic data.

In response to this concern, the USGS recently made a proposal to the Task Force to undertake a several-year hydrological study in the hillside area affecting Potter Marsh. The proposal would require an equal match of funding either from the Municipality or the State. In an effort to gain hydrologic information concerning both the Potter Marsh area and the hillside above the Marsh, the Municipality of Anchorage requested and received approximately $50,000 from the Legislature this past session for the purpose of conducting drainage studies in the Little Rabbit Creek and Potter Creek drainages. Large portions of private land above the Marsh are currently being zoned by the Municipality in accordance with the hillside wastewater plan. Large areas above the Marsh will undoubtedly be subject to increased private development in the near future following zoning decisions which are currently before the Planning and Zoning Commission, and will shortly be considered by the Assembly. We have already experienced a number of problems involving water resources in this area as a result of the limited development and growth which is now occurring.

There have been problems with private wells, and with drainage and runoff patterns which are created and/or altered by individual private developers.

If adequate storm drainage systems are to be provided in this area, the Municipality needs a great deal more information concerning the hydrology. As you can see, these actions will also directly affect the future of the Marsh. The design of storm drain systems must take into account the water summary to the Marsh and avoid, to the maximum extent possible, interruption of water quality and the flow regime (both surface and subsurface) which make the Marsh viable and productive.

In a cooperative step forward, the Municipality has agreed to match the $50,000 we have received from the Legislature with an initial $50,000 from USGS. These monies will be used to begin a several-year hydrologic study which will help give us the information we need to provide the storm drainage in residential areas in a way that will also protect the Marsh. Representatives from the Department of Natural Resources have indicated a willingness to include hydrologic study monies within their capital budget proposals from the Division of Geologic and Geophysical Survey. These state monies could be used for an additional match with other USGS funds to continue the study which we will begin this year. The Task Force strongly supports this cooperative approach, and urges the Water Resources Board to support state participation in this cooperative study through the budgeting of additional monies this next year. The information resulting from these studies will have numerous benefits. Not only will they be used to guide the inevitable improvement to storm drainage systems, the information will also be extremely valuable as road improvements and water and wastewater improvements are made in the area over time. All of these projects should be designed so that their impacts on the water which sustains the Marsh is minimized. Water is the lifeblood of the Marsh, and it is easy to see that in the absence of any real information concerning the flow of this lifeblood, we could - simply through ignorance - sever the Marsh's vital arteries.

In closing, I would like to mention one other topic - the instream flow regulations. It is my understanding that field agencies at long last completed work on the instream flow regulations and that regulations are in final review in the State Attorney General's office. I presume they will be adopted soon. As with any law or regulation, the instream flow regs will be only as good as our ability to implement, monitor and enforce them, where necessary. The Potter Marsh Task Force would like to add its voice to those who strongly urge adequate funding for the implementation of the instream flow regulations. While we are not naive about revenue constraints, and concerns over the growth of operating budgets, we must realize that the water quality and quantity of our streams is central to almost all facets of the economic and environmental fabric of Alaska.

Vanderbrink: Thank you. I think we will give it a try. One of the most important things about that in my mind is that there may be other marshes in other areas where development is taking place, in fact, there would certainly be. And the leadership provided by this can be certainly helpful.

Dennerlein: I appreciate that. We would hope to apply it to a number of other areas around -- I think this would be a good model.

Westberg: Is this going to be a study of the Hillside or the Hillside area above Potter Marsh contiguous there too?

Dennerlein: Were going to define the scope of the study and I will be happy to make available to you a scope of study which has been worked out between ourselves, USGS and DNR. We're going to primarily focus on Rabbit Creek, Little Rabbit Creek drainage systems -- Potter Creek to a lesser extent.

Vanderbrink: It would be interesting to see this become a joint effort with possibly some of the developers in the area who have already expended money.

Dennerlein: Good point. I should say that Gregg Jones who is in charge of Quadrant Development project involving all of Potter Valley is a member of the Task Force and has been at every meeting. Joe Cainge has been invited several times.

Vanderbrink: Bill?

Long: I might add that DGGS is putting in money to the Potter Marsh study probably starting next month. We will start our study in September.

Dennerlein: Compliments should go not only to F&G, but to two entities at DNR which is the District office and DGGS who have been to every meeting.

Vanderbrink: Thank you Chip. We will recess 'till 1:30.

EKLUTNA WATER PROJECT UPDATE

Bob Smith: We've identified three major areas of concern.

1. funding
2. water rights - Tom Meacham is currently employed by the Eklutna Water Project to look into the water rights issue
3. Validity of the project

Funding started with a $1 million grant by federal government, the legislature funded us at a level of $13,700,000 this year. We were funded $22,500,000 for this project.

The next stage was a need to demonstrate what was going to be the local share that Anchorage would provide to this project -- 25 percent of this project ($55 million). Funding request to the next legislative session will be $51 million.

Water rights are significant for us. There are federal and state problems. While we look at the water rights issues on Eklutna Lake, we will also look at the water rights issues on Ship Creek.

As far as questions on the validity of the project, an effort was made during the last legislative session to identify all previous studies on water sources within the Anchorage area. The current status of the project is that we are under final design on what we're calling pipeline segment I (PI). (Segment shown on slide.)

Although funding is in hand to do PII, PIII, PIV final design, consultants have been selected. We're planning to take the water from the lake and gravity flow into Anchorage.

Bill Barnwell: Why?

Smith: For general reasons, I might let Bill Blackmer from the James Montgomery team answer that question.

Blackmer: It is more feasible, economically and environmentally, to go to the lake.

Dutton: Will that include continued power development from the Eklutna power station?

Blackmer: Any water that we use for this project will deprive the turbines of water to generate electricity -- the average flow into Eklutna Lake is about 200,000,000 mgd. We will start by diverting 8,000,000. Our maximum day by the year 2020 is only 70,000,000 mgd -- roughly a third. During that year, the average flow will only be 41,000,000 mgd or 20 percent -- it will not have a major impact.

Smith: The water rights issue does include looking at the power plant.

Westberg: Who do the rights belong to presently?

Smith: APA has the authority to operate it.

Vanderbrink: What does the power house use?

Blackmer: The power house uses all of the 200,000,000 -- the lake seldom spills.

Westberg: You could be looking at a pretty expensive cost of water to make up the differential.

Blackmer: That has been included in our economic comparison, yes.

Westberg: Where does instream flow fit in?

Prokosch: The regs do not maintain that someone has to apply -- it's not mandatory.

Smith: Pipeline Segment I will be built (complete) by 1985 with or without water rights. The other things that are current within the project as I've mentioned are selection of consultants for final design of segments I, II, and III. There are many other studies going forward; alignments, right-of-way issues -- Pipeline Segment I is a valid project within itself. It will allow us to transport water to Eagle River from the current water treatment plant at Ship Creek. There are several members of my staff here, as well as members of the Eklutna Project team, and some members of the advisory commission for the Water and Waste Water Utility. We're here to answer any questions you might have.

Meacham: Bob, I was wondering, as far as conservation goes, how much consideration has been given to metering?

Smith: We've asked for the requirements on all new construction for meter setters and idlers to be a requirement on the building code. We were finally successful.

Westberg: Private wells will be metered?

Smith: There's no requirement, but we'll have the capability. We have $CH_2M$ Hill analyzing whether metering is valid.

EAGLE RIVER GROUND WATER STUDY.

Jim Munter: I'm here to present a 15-month study. The project area we've selected -- Eagle River is on the south side, Chugach is on the north east, and the Glenn Highway forms the west boundary.

ABSTRACT: by, Munter: A map of five hydrogeologic terranes in Eagle River based on surface geological information and subsurface data from approximately 420 water-well logs is presented. The terranes are defined by the following characteristics: depth to bedrock; type of bedrock; and occurrence of mapable confined or unconfined aquifers in the Quaternary sediments. Four confined aquifers, encompassing a contiguous area of two square miles, are arranged tier-like (ascending from east to west) proceeding South and Eastward for 3 miles along the Eagle River Valley Road from the Glenn Highway. A complex three-dimensional flow system has been identified through subsurface mapping and through a survey of 99 private domestic wells that included successful water-level measurements in 91 wells. Comparison of 81 of these water-level measurements with levels reported by drillers at the time of well construction shows that water levels are currently higher than were first reported in 89 percent of the wells. The average water-level increase was 7.2 feet with a standard deviation of 5.8 feet. The water level increase is attributed to several recent years of above-average precipitation, and represents an increase in groundwater storage. Recommendations to water managers are that future groundwater development be encouraged in the alluvial fan water-table aquifer and that additional sources be developed in the two lowermost confined aquifers for use during times of peak demand, seasonal dry spells, and droughts.

DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Bob Martin: We have five divisions;

- Management
- Seafood, and Animal Industries
- Environmental Quality Management Division
- Operational Division
- Facilities Construction and Operations Division.

We are currently working on:

- Placer mining enforcement
- Hazardous waste regulations. Example: roadway salt stockpiling; is being detected in groundwater
- Increased emphasis in the seafood sanitation program

- State - more comprehensive program of inspection of seafood processing facilities to develop more public confidence
- Budget - substantial cuts -- the agency took approximately a 50 percent cut in travel. We would have to schedule travel very carefully.

Issue of bank loans and subdivision review growth has placed huge, increasing demand on DEC work load. The Wasilla office has received 20 new subdivision reviews per day on occasion.

Randy Bayliss: Priorities: there has been a lot of interest in placer mining and agriculture.

Old business: 208 stuff -- there are two projects: one is the Sludge Disposal, and the Forest Practices training, the village assistance thing. As far as 208 being reviewed, there are rumors, I don't know how successful it will be. There is 205J money around that's for water quality planning and monitoring. We have contacted the municipalities asking for comments on how the money should be spent -- $400,000.

Tileston: One of the problems of the 208 was that the programs had little or no relationship to the priorities of the state. Do you see the same kind of problems with these funds?

Bayliss: No. The restrictions are not the same. We have more flexibility.

Westberg: We felt that the projects were too lightly funded to get adequate results from the consultants.

Bayliss: I agree with you.

Clean Lakes: a small amount of money will be used primarily to continue previous studies to clean lakes.

Recycling and placer mining discharge: the legislature allowed for $150,000 study.

Reclassifications: There are three petitions under consideration to classify certain streams as industrial use only. Some of those watersheds have other uses. The streams are Tolovana, Hammond, and Moland Creeks. Recommendations have been to not allow the reclassification of the Tolovana, and Hammond.

We have several regulation changes: reclass, procedure, change. Three basic permits:

30 day -- district office
60 day -- regional office
120 day -- Juneau signoff by the Commissiioner

We are trying to change the 120 day permit to the 60 day version, taking the decision out of the commissioner's hands into the regional supervisor's hand.

Vanderbrink: Did you say you would eliminate the 120 day and 30 day permits?

Bayliss: No. We will take the 120 day procedure and make it identical to our 60 day procedure.

Tileston: One of the problems you run into in Alaska is that someone living in one part of the state has an interest in another part. If we have a regional decision, it may or may not hit people who are vitally interested. Is there some kind of state register identifying those action coming up? Where has that gotten at this point?

Bayliss: I don't know.

After DEC's presentation, the Board went into its business session.

Major points addressed were:

1. Resolution to Governor -- additional funding required to implement instream flow regs.

2. Board delegate to Esther, authorization to sign letters.

3. Mail Memorandum of Understanding between ADF&G, DEC and DNR on permit reform to Board members.

4. Mail Cheyenne Supreme Court decisilon to Esther and Board.

5. Letter of appreciation to Sims from the Board.

6. Letter to Rocky/Fred/Stemp -- do they want to contilnue as active board members?

7. Letter to Governor -- participate in WSWC.
   - research costs and status of full voting membership.

8. Letter of commendation to J. Munter, DGGS for kEagle River Hydrologic Study.

9. Resolution to Governor -- request AG's office review adequacy and responsibility for dam safety.

10. Summary on dam safety seminar to commissioner/boasrd.

11. Summary of what is being done on dam safety.

12. Letter to AG's office -- start adjudication on Ship Creek
    - adequate state authority to implement Basin-wide adjudication?

13. Letter to Potter Marsh Task Force -- supporting hydrologic study.

Contact the Governor's office -- how many advisory boards,
report directly to the governor?
report directly to the agency?
report directly to the legislature?

The Board set up its next meeting in Juneau, tentatively scheduled for March 13, 14, 1984. After closing comments, the Board adjourned.

Attendance list.

| | |
|---|---|
| Philip A. Emery | U.S.G.S., WRD, Anchorage |
| Donald M. Schell | Inst. of Water Res., U of Ak, Fairbanks |
| Gary J. Prokosch | ADNR-SCDO, Anchorage |
| Edward G. Grey | SCS, Anchorage |
| Larry Dearborn | DGGS, Eagle River |
| Chet Zenone | USGS, Anchorage |
| Paul Meyer | U of Ak, AEIDC, Anchorage |
| Max Keisberger | AWWU |
| Brian Crewdsen | AWWU |
| Jan Flaharty | Ak Center for the Environment, Anchorage |
| Jim Sweeney | MOA, Public Utilities, Anchorage |
| Ross G. Schaff | DGGS |
| Jim Munter | DGGS |
| Stan Carrick | DGGS |
| Roger Clay | DGGS |
| Ray George | USGS |
| L. J. Perry Dwight | Water Resources Consultant, Anchorage |
| Meg Hayes | SCDO District Manager, Anchorage |
| Gordon Nelson | USGS |
| Bill Long | DNR-DGGS, Eagle River |
| Robert W. Smith | AWWU |
| Bill Barnwell | DGGS |
| L. A. Dutton | DLWM |
| Mary Lu Harle | DNR-Water Management |
| Bruce Stafford | DNR-Water Management |
| Robert E. Millon | Civil Eng., U. of Alaska, Anchorage |
| Richard E. Hutson | AWWU |
| Charley Bryant | AWWU |
| Lawrence M. Bieger | M.O.A, AWWU |
| BILL Blackmer | Eklutna Water Project |
| Ray Blackman | AWWU |
| Phyllis Weber | ADF&G-Habitat |
| Randy Bayliss | DEC, Juneau |
| Mike Granata | DLWM-Water Management |